

Title (en)

PROSTHETIC GROUPS ATTACHED TO STANNYLATED POLYMERS FOR THE SYNTHESIS OF RADIOPHARMACEUTICALS

Title (de)

PROTHESENGRUPPEN GEBUNDEN AN STANNYLIERTEN POLYMEREN FÜR DIE SYNTHESE VON RADIOPHARMAZEUTIKA

Title (fr)

GROUPEMENTS PROSTHETIQUES ATTACHES A DES POLYMERES STANNYLES POUR LA SYNTHESE DE COMPOSES RADIOPHARMACEUTIQUES

Publication

EP 1624901 B1 20120725 (EN)

Application

EP 04730617 A 20040430

Priority

- IB 2004001834 W 20040430
- US 46775203 P 20030502

Abstract (en)

[origin: WO2004098650A2] The present invention relates to compositions and methods for preparing radiopharmaceutical compounds in high chemical-purity and isotopic-purity. The present invention provides polymer-bound precursors to radiopharmaceutical compounds that can be converted to radiopharmaceutical compounds in one step. In a preferred embodiment, a radiopharmaceutical precursor is bound to a polymeric support via a prosthetic group comprising an alkenyl-tin bond. The radiopharmaceutical precursor is converted to a radiopharmaceutical compound in one step involving cleavage of the alkenyl-tin bond and incorporation of a radioisotope to form the radiopharmaceutical compound. Importantly, the polymeric support containing the toxic tin by-products can be easily removed from the radiopharmaceutical compound by filtration. The present invention can be used to install a large number of different radioisotopes. In a preferred embodiment, the radioisotope is ^{211}At , ^{123}I , or ^{131}I .

IPC 8 full level

A61K 51/04 (2006.01); **A61K 51/08** (2006.01); **C07B 59/00** (2006.01); **C07F 7/22** (2006.01); **A61K 101/02** (2006.01)

CPC (source: EP KR US)

A61K 51/00 (2013.01 - KR); **A61K 51/04** (2013.01 - EP US); **A61K 51/0489** (2013.01 - EP US); **A61K 51/0497** (2013.01 - US); **A61K 51/065** (2013.01 - US); **A61K 51/088** (2013.01 - US); **A61P 35/00** (2017.12 - EP); **C07B 59/00** (2013.01 - EP KR US); **C07F 7/2208** (2013.01 - EP US); **C08G 61/12** (2013.01 - KR); **C08G 79/12** (2013.01 - KR); **C07B 2200/11** (2013.01 - EP US)

Citation (examination)

GAGNON M K ET AL: "DEVELOPMENT OF A POLYMER-SUPPORTED PROSTHETIC GROUP EN ROUTE TO RAPID RADIOPHARMACEUTICAL PRODUCTION", JOURNAL OF NUCLEAR MEDICINE, SOCIETY OF NUCLEAR MEDICINE, RESTON, VA, US, vol. 44, no. 5, SUPPL, 1 May 2003 (2003-05-01), pages 315P, ABSTR.NO.1128, XP008039621, ISSN: 0161-5505

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2004098650 A2 20041118; **WO 2004098650 A3 20050127**; AU 2004237155 A1 20041118; AU 2004237155 B2 20080228; CA 2524466 A1 20041118; CA 2524466 C 20131112; CN 100536926 C 20090909; CN 101675997 A 20100324; CN 101675997 B 20130717; CN 1812816 A 20060802; EP 1624901 A2 20060215; EP 1624901 B1 20120725; HK 1096581 A1 20070608; JP 2006525311 A 20061109; JP 2010265283 A 20101125; JP 5265869 B2 20130814; JP 5315297 B2 20131016; KR 20060100200 A 20060920; US 2007155976 A1 20070705; US 2013323170 A1 20131205; US 8435492 B2 20130507; US 8697032 B2 20140415

DOCDB simple family (application)

IB 2004001834 W 20040430; AU 2004237155 A 20040430; CA 2524466 A 20040430; CN 200480018349 A 20040430; CN 200910160575 A 20040430; EP 04730617 A 20040430; HK 07101240 A 20070201; JP 2006506627 A 20040430; JP 2010149018 A 20100630; KR 20057020853 A 20051102; US 201313856143 A 20130403; US 55524804 A 20040430